

XXII.—*The Birds of Manchuria.*

By COLLINGWOOD INGRAM, M.B.O.U.

(Plate VIII.)

I. INTRODUCTION.

Two years ago I journeyed from Vladivostock to Berlin. As the train travelled slowly through the wooded valleys of the Khingan Mountains and across the park-like meadowlands of North Manchuria, I was much impressed by the ornithological promise of that beautiful but comparatively little known country. Upon my return home I immediately searched the zoological libraries of London for information on the subject—but could find none there. Of the Ornis of Manchuria very little was known. In the “eighties,” Mr. (now Sir Evan) James brought back a small but interesting collection from South Manchuria, while fifteen years later a certain Capt. Karpow, then in the Russian Army and quartered at Yingtzu, made another small collection, which I believe is now in the St. Petersburg Museum. These two collections, both from the southern part of the country, constitute all that is known to me of Manchurian birds. Realising this and hoping that the country would prove a fruitful field for ornithological research, I wrote to my friend Mr. Alan Owston, of Yokohama, and with his assistance arranged that a Japanese collector should visit Manchuria during the summer of 1908. Although the results of this expedition were disappointing in the sense that they yielded no novelties, they were nevertheless extremely interesting from another point of view—they served to fill in a considerable gap in our knowledge of the geographical distribution of East-Asian birds. After all, when the extreme severity of its winter climate is taken into consideration, it is hardly surprising to find that Manchuria can boast of no local races of birds. According to Sir Evan James the temperature falls to below -49° Fahr. in the north, while even on the coast it reaches -10° Fahr. The summer, however, is temperate,



Leonardson & Co.

MAP OF MANCHURIA

Scale of Miles
 100 200 300 400 500

Collecting stations marked thus ▲

though very wet, rain falling "almost without intermission" from May to the end of August.

The resident species of birds seem to be comparatively few in number, while, on the whole, the avifauna appears to resemble that of Siberia very closely, and in North Manchuria might almost be said to be boreal in character. This is especially noticeable in the various races of Spotted Woodpeckers and Marsh-Tits, which, in some cases, appear to be almost identical with those existing in the extreme north of Europe. *Turdus dubius*, *Fringilla montifringilla*, and *Calcarius lapponicus* are among the birds that I was surprised to find so far south during the breeding-season. Below Kirin the avifauna naturally tends to become more "tropical" or like that of China: as examples of this, I might mention *Halcyon coromanda*, *Eurystomus calonyx*, and *Terpsiphone incii*.

Dr. Valentine Bianchi has compiled a brief catalogue of the birds collected by Capt. Karpow* (comprising 51 species), and this has been published in the 'Annuaire du Musée de St. Pétersbourg' for 1902. Sir Evan James's collection is now in the Natural History Museum, where I have been able to make a careful examination of all his specimens. Reference to these will be found in the following pages, the collector's initials appearing in brackets after each entry. Perhaps it is hardly necessary to say that the list of birds contained in the present paper is anything but complete. I have no doubt that when the country becomes better known there will be many species to add to the number. However, I trust that my work will serve at least as a foundation for the future study of Manchurian ornithology.

In his interesting book, 'The Long White Mountain,' Sir Evan James describes Manchuria as being essentially a highland country; almost the entire south and east being occupied by the Pai-shan and other mountains, while the Khingans occupy the north-western corner. The same writer goes on to say that "The plain country is limited to the

* In that paper, written in Russian, the town Yingtzu is spelt Inkow, or Inkou.

fertile alluvial tract in the west of Fêng-tien (or Liao-Tung Province), on the banks of the Liao Ho, and to the north and west of Kirin, in the region of Petuna, and where the Nonni drains the vast area of undulating steppes.”

My Japanese collector reached the Khingan Mountains on April 17th and stayed at a station of that name on the Trans-Siberian Railway until June 30th. He informs me that this station is the highest point on the line and is situated about 3500 ft. above sea-level. Thence he went south to Changchun and afterwards to two neighbouring villages called Fan-chia Tun and Chu-chia Tai. He returned to Japan early in October. In the accompanying map (Plate VIII.) I have marked the places visited by him, so that they may be seen at a glance; I have also shown most of the towns mentioned on Sir Evan James's labels.

The works chiefly cited in my paper are Taczanowski's 'Faune ornithologique de la Sibérie Orientale,' Mr. Dresser's 'Manual of Palearctic Birds,' and Dr. Hartert's 'Vögel der paläarktischen Fauna.' In referring to them, I have merely given the author's name, followed by the number of the page. Sir Evan James in his excellent work on Manchuria has unfortunately devoted but little space to ornithology.

In conclusion, I must express my thanks to Mr. Alan Owston, who was good enough to make all the necessary arrangements in connexion with the expedition: while I am also deeply indebted to Dr. Bowdler Sharpe and Mr. Ogilvie-Grant for their great kindness during my work in the Natural History Museum, and last, but not least, to Sir Evan James for very kindly looking through my proof-sheets before they went to press.

II. LIST OF THE BIRDS OF MANCHURIA, WITH REMARKS.

1. *Turdus dubius* Bechst. Bechstein's Thrush.

Tacz. p. 289; Dresser, p. 7.

a. ♀. Khingan Mts., alt. 3500 ft. May 13, 1908.

b. ♂. " " " 3400 ft. " 19, 1908.

Iris brown; feet blackish brown; bill dark horn-brown.

As this Thrush breeds in Siberia (its eggs were first taken by Mr. Popham in 1875 in the valley of the Yenesei) and migrates in winter to China and Japan, I fully expected to find it in Manchuria as a migrant; but it was somewhat surprising to procure it there as late as May 19th—a date which suggests a possibility of its remaining to nest in the mountains of North Manchuria.

2. *TURDUS NAUMANNI* Temm. Red-tailed Thrush.

Tacz. p. 294; Dresser, p. 9.

a, b, c. ♂ ♂ ♀. Chang-tsai-Ling, S. Manchuria. Nov. 19, 1886. (*E. J.*)

Probably wintering in South Manchuria. Chang-tsai-Ling is roughly seventy miles east of Kirin.

3. *TURDUS OBSCURUS* Gm. Dusky Thrush.

Tacz. p. 306; Dresser, p. 13.

This bird is included in the present paper on the authority of Bianchi, who records a specimen from Yingtzu, May 10, 1901.

4. *TURDUS PALLIDUS* Gm. Pale Thrush.

Tacz. p. 307; Dresser, p. 15.

a, b. Hsiao Shan Forest. July 6, 1886. (*E. J.*)

These two examples, obtained by Sir Evan James, are both fledglings and could only just have left the nest when shot. Seebohm examined them and described them in his 'Monograph of the Turdidæ' (vol. ii. p. 186). He was doubtless able to assign them to the present species by the characteristic broad white tips to their tail-feathers.

They were shot in the valley of the Sungari, about seventy miles from the source of the river.

5. *GEOCICHLA SIBIRICA* Pall. Siberian Ground-Thrush.

Tacz. p. 282; Dresser, p. 19; Ingram, *Ibis*, 1908, p. 134.

A male was procured by Capt. Karpow at Yingtzu, on May 10, 1901.

6. *MONTICOLA GULARIS* (Swinhoe). White-throated Rock-Thrush.

Tacz. p. 323; Dresser, p. 22.

a, ♂. Khingan Mts., alt. 3800 ft. May 28, 1908.

b. ♀. " " " " May 29, 1908.

Iris very dark brown; feet horn-coloured; bill black.

The male is in full breeding-plumage and its colouring is exceptionally bright, all the feathers being quite free from the brown margins shown in the winter dress. The chestnut of the rump and under parts is darker and richer than in any of the examples in the British Museum. The breeding-area of this beautiful Rock-Thrush is probably restricted to E. China, Manchuria, and the extreme south-east of Siberia. Bianchi records a male from Yingtzu, May 14, 1901.

7. *PRATINCOLA MAURA* Pall. Siberian Stonechat.

Tacz. p. 355; Dresser, p. 46; Ingram, *Ibis*, 1908, p. 138.

a-e. 4 ♂, 1 ♀. Khingan Mts., alt. 3400–3600 ft. May 20 to June 25, 1908.

Iris brown; bill and feet black.

These birds were obviously nesting in the Khingans; in Japan nidification commences during the first and second week in May. Bianchi records the Siberian Stonechat from Yingtzu, Oct. 11, 1901.

8. *RUTICILLA AUREA* (Gm.). Daurian Redstart.

Tacz. p. 326; Dresser, p. 52.

a, b. ♂ & ?. Hsiao Shan; Chang Pai-shan Forests. July 6, 1886. (*E. J.*)

9. *CALLIOPE CAMTSCHATKENSIS* (Gm.). Siberian Ruby-throat.

Tacz. p. 335; Dresser, p. 65.

a, b. ♂ ♂. Khingan Mts., alt. 3400 ft. May 22, 1908.

Iris black-brown; feet greyish-brown; bill black.

This bird, no doubt, nests in the Khingan Mountains; it is known to do so in Mongolia and North China (Tacz. p. 337).

A male was killed near Yingtzu on April 28, 1901 (*Bianchi*).

10. NEMURA CYANURA (Pall.). Red-flanked Bluetail.

Tacz. p. 343; Dresser, p. 69; Ingram, *Ibis*, 1908, p. 139.

a, b. ♂ ♀. Khingan Mts., alt. 3500-3700 ft. May 6 and 12, 1908.

Iris dark brown; feet brown; bill blackish.

11. LARVIVORA CYANEA (Pall.). Siberian Blue Robin.

Tacz. p. 338; Dresser, p. 70; Ingram, *Ibis*, 1908, p. 137.

a, b. ♂ ♂. Khingan Mts., alt. 3200-3700 ft. June 6 and 8, 1908.

Iris dark brown; feet plumbeous-brown; bill brown.

This species probably visits Manchuria to breed in the mountains; in Japan it is essentially a bird of the hills.

12. PHYLLOSCOPUS BOREALIS (Blas.). Eversmann's Willow-Warbler.

Tacz. p. 254; Dresser, p. 99; Hart. p. 517.

a, b. ♂ ♀. Chu-chia Tai, Kirin Province. Aug. 17, 1908.

These birds were evidently passing through Manchuria on their southward migration.

13. PHYLLOSCOPUS PLUMBEITARSUS Swinh. Middendorff's Willow-Warbler.

Tacz. p. 259; Sharpe, *Hand-l.* vol. iv. p. 217; Hart. p. 511.

a. ♂. Khingan Mts., alt. 3400 ft. June 1, 1908.

b, c. ♂. " " " 3700 ft. June 3 and 5, 1908.

d. ♂. " " " 3600 ft. June 8, 1908.

e, f. ♂ ♀. Khingan Mts., alt. 3400 ft. June 11 and 14, 1908.

g. ♀. Khingan Mts., alt. 3600 ft. June 16, 1908.

h. ♂. Chu-chia Tai, Kirin Province. Aug. 30, 1908.

Iris blackish-brown; feet greyish-brown; bill blackish above.

Evidently breeding in the mountains and working southward, through Central Manchuria, in August.

14. *PHYLLOSCOPUS SUPERCILIOSUS* (Gm.). Yellow-browed Willow-Warbler.

Tacz. p. 264; Hart. p. 518.

a, b, c, d. ♂ ♂ ♂ ♂. Khingan Mts., alt. 3400-3800 ft. May 13-17, 1908.

e. ♂. Chu-chia Tai, Kirin Province. Aug. 30, 1908.

f. ♂. Fan-chia Tun, Kirin Province. Sept. 12, 1908.

g, h. ♂ ♀. Near Kirin. 1886. (*E. J.*)

Iris dark hazel; feet light brown or horn-brown; bill black-brown above.

15. *PHYLLOSCOPUS PROREGULUS* (Pall.). Pallas's Willow-Warbler.

Tacz. p. 267; Sharpe, Hand-l. iv. p. 215; Hart. p. 523.

a, b. ♂ ♂. Khingan Mts., alt. 3600 ft. May 17, 1908.

Iris dark brown; feet horn-brown; bill blackish-brown above.

My birds are typical *P. proregulus*, both in colour and wing-formula (*cf.* Gätke, Ibis, 1889, p. 578).

Capt. Karpov procured this Willow-Warbler at Yingtzu, April 3, 1901 (*Bianchi*).

16. *PHYLLOSCOPUS FUSCATUS* (Blyth). Dusky Willow-Warbler.

Luscinola fuscata Tacz. p. 272; Dresser, Man. Pal. B. p. 125.

Phylloscopus fuscata Hart. p. 528.

a, b, c. ♂ ♂ ♀. Khingan Mts., alt. 3400-3500 ft. May 19-28, 1908.

d, e. ♂ ♂. Khingan Mts., alt. 3600-3800 ft. June 3 and 25, 1908.

Iris dark brown; feet horn-brown; bill blackish-brown above.

Dresser (Man. Pal. B. p. 126) says that this species "frequents low bushes on the plains and at low altitudes in

the hills, especially in damp localities." That it is not, however, entirely a lowland species is shown by my series of skins procured at elevations varying from 3400 ft. to 3800 ft., while Radde found it up to an altitude of 7000 ft. on the Tarei-nor and Middendorff met with it up to the summits of the Stanovoi Mountains. I prefer to follow Hartert and place this species among the *Phylloscopi*; in habits, as well as in general appearance, it appears to belong to this genus rather than to *Lusciniola*.

Bianchi records the Dusky Willow-Warbler from Yingtzu, Sept. 11, 1901.

17. ACROCEPHALUS ARUNDINACEUS ORIENTALIS. Eastern Great Reed-Warbler.

Hart. p. 558; Dresser, p. 120.

Calamoherpe turdoides orientalis, Tacz. p. 234.

a, b. ♂ ♀. Chang-chun, Kirin Province. July 15 and 16, 1908.

This Warbler has also been procured at Yingtzu, July 1, 1901 (*Bianchi*).

18. ACROCEPHALUS BISTRIGICEPS Swinh. Schrenck's Reed-Warbler.

Tacz. p. 236; Dresser, p. 121; Hart. p. 565; Ingram, Ibis, 1908, p. 144.

a-k. ♂ ♂ ♀ ♂ ♂ ♀ ♀. Khingan Mts., alt. 3400-3500 ft. June 15-25, 1908.

l. ♂. Chang-chun, Kirin Province. July 14, 1908.

Iris blackish-brown; feet dark horn-brown; bill blackish-brown.

Capt. Karpow twice procured this Warbler at Yingtzu, a male on July 1, and a second on Sept. 29, 1901 (*Bianchi*).

19. ARUNDINAX AËDON (Pall.). Thick-billed Warbler.

Hartert, p. 554.

Arundinax aëdon Tacz. p. 227.

Lusciniola aëdon, Dresser, p. 124.

a. ♀. Khingan Mts., N. Manchuria, alt. 3400 ft. June 6, 1908.

b, c. ♂ ♂. Khingan Mts., N. Manchuria, alt. 3400 ft. June 11, 1908.

Iris dark brown; feet dark greyish-brown; upper mandible walnut-brown.

20. *LUSCINIOLA SCHWARZI* Radde. Radde's Warbler.

Tacz. p. 276; Dresser, p. 127.

a, b, c. ♂ ♂ ♂. Khingan Mts., alt. 3400-3600 ft. May 29 and 30, 1908.

d, e. ♂ ♂. Khingan Mts., alt. 3700 ft. June 16 and 18, 1908.

Iris blackish-brown; feet horn-coloured; bill blackish above, lighter below.

21. *LOCUSTELLA LANCEOLATA* (Temm.). Lanceolated Grasshopper-Warbler.

Tacz. p. 244; Dresser, p. 132; Hart. p. 553.

a, b. ♂ ♀. Khingan Mts., alt. 3500 ft. June 6 and 8, 1908.

Iris dark brown; feet cinnamon-coloured; upper mandible blackish-brown.

In the summer this species is widely distributed throughout Siberia, but I do not know of its ever having been found breeding south of that country; its occurrence in Manchuria as late as June 8th is, therefore, interesting.

22. *LOCUSTELLA CERTHIOLA* (Pall.). Pallas's Grasshopper-Warbler.

Oates, F. Brit. Ind. i. p. 352; Tacz. p. 239; Dresser, p. 133; Hart. p. 550.

a. ♂. Khingan Mts., alt. 3300 ft. June 8, 1908.

b, c, d. ♂ ♂ ♀. Khingan Mts., alt. 3400 ft. June 14, 1908.

e, f. ♂ ♂. Khingan Mts., alt. 3300 ft. June 18, 1908.

Iris dark brown; feet cream-coloured; bill blackish-brown.

With one exception, these examples from the Khingan Mountains are all in very bright plumage, the light margins of the feathers on the back (and especially those of the

wings) being broad and shewing in strong contrast to their blackish centres. On the other hand, the example *a* is singularly dark, slightly speckled on the breast, and with the margins of the feathers of the back and wings brown and dark russet-brown, instead of whitish-buff and pale olive-brown. Indeed this last bird differs so markedly from the others that it is difficult to believe that it belongs to the same species. There are, however, several dark specimens in the National Collection that agree perfectly with my Manchurian skin, but these (known to the older authors under the name of *L. rubescens* Blyth) were mostly procured in winter. Perhaps they are all young birds; but if immaturity is the explanation of this dark phase, it is somewhat curious to find it in an example killed as late as June 8th, and in an individual that must necessarily have passed through both the autumn and spring moults.

Crossing from Japan to Vladivostock in June 1907, a Grasshopper-Warbler came on board our steamer. It was in such an exhausted condition that it allowed me to approach within two or three feet of it, so close, in fact, that I made several attempts to catch it in my hands. I am confident that it belonged to the present species, which is the more interesting as this Warbler was hitherto unrecorded from Japan.

23. *LOCUSTELLA FASCIOLATA* (Gray). Gray's Grasshopper-Warbler.

Tacz. p. 249; Dresser, p. 135; Hart. p. 545.

a, b. ♂♂. Khingan Mts., N. Manchuria, alt. 3800 ft. June 19, 1908.

c, d. ♂♂. Khingan Mts., N. Manchuria, alt. 3800 ft. June 20, 1908.

e. ♂. Khingan Mts., N. Manchuria, alt. 3900 ft. June 26, 1908.

f. ♂. Khingan Mts., N. Manchuria, alt. 4000 ft. June 27, 1908.

Iris brown; feet drab; bill blackish-brown.

Gray's Grasshopper-Warbler was probably breeding in

the Khingan Mountains, for examples were procured as late as June 27th. Although nothing definite is known of its nesting-habits, this bird is supposed to breed in Eastern Siberia; but Dybowski and Godlewski only found it rarely, and apparently as a migrant, in the environs of Irkutsk, though the latter heard it in July during his travels in Yeniseisk. It winters in the Malay Archipelago. In the young of this Warbler the plumage is much diffused with yellow, and most of the examples in the British Museum, killed during winter in the Malay Islands, are in this dress. My birds are all in breeding-plumage, and are russet-brown above, with the lower neck ashy grey.

24. *ACCENTOR ERYTHROPYGIUS* (Swinh.). Red-rumped Alpine Accentor.

a. ♀. Mt. Pai-shan, 7000 ft. July 14, 1886. (*E. J.*)
Iris blackish; feet pinkish.

25. *ACREDULA CAUDATA* (Linn.). Long-tailed Tit.

Tacz. p. 443; Hart. p. 382.

a. Near Ninguta. Oct. 1886. (*E. J.*)

This specimen is in a very poor state of preservation; the bird was moulting heavily when shot.

26. *PARUS CINEREUS MINOR*. Japanese Great Tit.

Hellmayr, Mon. Paridæ, p. 104.

a. juv. ♀. T'ou-i-pi Ho, Pai-shan Forests. July 17, 1886. (*E. J.*)

Iris brown.

27. *PARUS BOREALIS BAICALENSIS*. Baikal Marsh-Tit.

Tacz. p. 437; Hellmayr, Mon. Paridæ, p. 65.

a. ♂. Khingan Mts., 3500 ft. April 22, 1908.

b, c, d. ♂ ♂ ♀. Khingan Mts., 3500-3800 ft. May 3 and 6, 1908.

Iris dark brown; feet greyish-black; bill blackish.

These examples are large and very grey above and have the under parts almost white. Average measurements: wing 2.65 in.; tail 2.85 in.

28. *PARUS PALUSTRIS BREVIROSTRIS*. Short-billed Marsh-Tit.

a. ♀. Khingan Mts., 3900 ft. April 29, 1908.

b. ♂. „ „ 3700 ft. May 2, 1908.

Iris dark brown; feet greyish-black; bill blackish.

Compared with the others, two of my birds have slightly browner backs, and a faint metallic or steely sheen on the black part of their heads. Their bills are decidedly short and thick, and their wing-feathers are distinctly margined with greyish-white. Sir Evan James's bird, from Chang-tsai-Ling, is still browner and, if anything, the bill is even more abrupt. I have therefore referred it to Taczanowski's *crassirostris*, but the difference between these two races seems to me to be very slight.

29. *PARUS PALUSTRIS CRASSIROSTRIS*. Great-billed Marsh-Tit.

a. ♂?. Chang-tsai-Ling, 80 miles E. of Kirin. Nov. 1886. (*E. J.*)

The measurements are: wing 2·5 in.; tail 2·7 in.

30. *SITTA AMURENSIS*. Amur Nuthatch.

a. ♂. Lao-sung Ling. 1886. (*E. J.*)

b, c, d. ♀ and ?? . Lao-sung Ling. 1886.

Sir Evan James writes (Oct. 31): "We then crossed the top of the ridge called Lao-sung Ling, 1400 feet elevation, and descended into the vale of Tumen." This pass is about forty-five miles south of Ninguta.

31. *MOTACILLA LUGUBRIS LEUCOPSIS*. White-faced Wag-tail.

Tacz. p. 366; Dresser, p. 198.

a, b. ♂ ♂. Khingan Mts., alt. 3500 ft. June 3 and 4, 1908.

Iris very dark brown; feet and bill black.

32. *MOTACILLA ALBA BAICALENSIS*. Siberian White Wag-tail.

Tacz. p. 361; Dresser, p. 201; Hart. p. 304.

a-f. ♂ ♂ ♀ ♂ ♀ ♀. Khingan Mts., alt. 3400–3500 ft.
April 30 to May 18, 1908.

Iris very dark brown; feet and bill black.

The three species of Pied or White Wagtails were all apparently breeding in the same area.

33. *MOTACILLA ALBA OCULARIS.* Streak-eyed Wagtail.

Tacz. p. 364; Dresser, p. 202; Hart. p. 307.

a, b. ♀ ♀. Gt. Khingan Mts., alt. 3400 ft. May 6 and 12, 1908.

Iris very dark brown; feet and bill black.

34. *MOTACILLA BOARULA MELANOPE.* Eastern Grey Wagtail.

Tacz. p. 375; Hart. p. 300; Ingram, *Ibis*, 1908, p. 152.

a-e. ♂ ♂ ♀ ♂ ♀. Khingan Mts., alt. 3500–3600 ft. May 13–29, 1908.

f-l. ♀ ♂ ♂ ♂ ♂ ♂ ♂. Khingan Mts., alt. 3400–3000 ft.
June 1–26, 1908.

m. ♀. Chu-chia Tai, Kirin Province. Aug. 29, 1908.

n, o. Lao-ling, near Tang Ho Kou. June 30, 1886.

(*E. J.*)

Iris very dark brown; feet blackish; bill blackish.

This bird is probably common in most parts of Manchuria in suitable localities.

35. *MOTACILLA CITREOLA* Pall. Yellow-headed Wagtail.

Tacz. p. 387; Dresser, p. 203; Hart. p. 296.

a-o. 7 ♂, 7 ♀. Khingan Mts., alt. 3400 ft. May 17–31, 1908.

p-t. 3 ♂, 2 ♀. Khingan Mts., alt. 3500 ft. June 1–18, 1908.

Iris dark brown; feet and bill black.

My skins measure, on the average, slightly more than those in the British Museum, but this is perhaps explained by the fresh condition of their plumage. The wings of most of the males exceed 3.5 in. in length. The Yellow-headed

Wagtail is evidently a common breeding-bird in the mountainous country of N. Manchuria.

36. *MOTACILLA FLAVA BOREALIS*. Blue-headed Wagtail.

Tacz. p. 382 ; Dresser, p. 205 ; Hart. p. 291.

a. Khingan Mts., alt. 3400 ft. May 22, 1908.

Iris very dark brown ; feet and bill black.

37. *ANTHUS TRIVIALIS MACULATUS*. Eastern Tree-Pipit.

Dresser, p. 212 ; Ingram, Ibis, 1908, p. 153.

Pipastes maculatus Tacz. p. 390.

a-d. ♂ ♂ ♂ ♂. Khingan Mts., alt. 3400-3600 ft. May 12-18, 1908.

e, f. ♂ ♂. Khingan Mts., 3600 ft. June 11, 1908.

g. ♂. Fan-chia Tun, Kirin Province. Sept. 1908.

Iris dark brown ; feet flesh-brown ; bill brownish.

38. *ANTHUS RICHARDI* Vieill. Richard's Pipit.

Tacz. p. 395 ; Dresser, p. 219.

a. ♂. Khingan Mts., alt. 3500 ft. May 20, 1908.

b. ♂. Chang-chun. July 6, 1908.

c. Fan-chia Tun, Kirin Province. Sept. 9, 1908.

Iris dark brown ; feet flesh- or pinky-brown ; upper mandible dark brown.

Bianchi received an example from Yingtzu, killed on Oct. 4, 1901.

39. *ORIOULUS DIFFUSUS* Sharpe. Black-naped Oriole.

Oriolus indicus Dresser, p. 228.

a. ♂. Chang-chun, Kirin Province. July 13, 1908.

b, c. ♀ ♀. Chu-chia Tai, Kirin Province. Aug. 9 and 17, 1908.

d. ♀. Fan-chia Tun, Kirin Province. Sept. 11, 1908.

e. ♂. Near Kirin. Sept. 1886. (*E. J.*)

40. *LANIUS SPHENOCERCUS* Cab. Long-tailed Grey Shrike.

Tacz. p. 485 ; Dresser, p. 230.

a. ♂. Plains near Tsi-tsi-ha, Manchuria. (*E. J.*)

This is a very rare Shrike. There is no date on the label, but Sir Evan James visited Tsi-tsi-ha on Sept. 20-23, 1886.

41. *LANIUS CRISTATUS* Linn. Red-tailed Shrike.

Tacz. p. 498 ; Dresser, p. 240 ; Ogilvie-Grant, Nov. Zool. 1902, p. 481 ; Hart. p. 446.

a-c. ♂ ♂ ♂. Khingan Mts., alt. 3500 ft. May 29-31, 1908.

d-g. ♂ ♂ ♂ ♀. Khingan Mts., 3200-3600 ft. June 9-22, 1908.

h. ♂ imm. Chu-chia Tai, Kirin Province. Aug. 24, 1908.

Iris dark brown ; bill and feet black.

Some of the specimens of *L. cristatus* in the British Museum, and one or two of my Manchurian skins, have the grey on the forehead more pronounced than their fellows, and these might almost be said to intergrade with certain examples of *L. lucionensis*. With the abrasion of the plumage, *L. cristatus* certainly becomes greyer and more like *L. lucionensis*.

42. *LANIUS LUCIONENSIS* Linn. Philippine Red-tailed Shrike.

Tacz. p. 502 ; Dresser, p. 242 ; Ogilvie-Grant, Nov. Zool. 1902, p. 483 ; Hart. p. 447.

a. ♂. Chu-chia Tai, Kirin Province. July 30, 1908.

b. ♂. " " " " Aug. 24, 1908.

These two specimens are in very worn plumage, but I think that they may safely be referred to the present species.

43. *MUSCICAPA SIBIRICA* Gm. Siberian Flycatcher.

Dresser, p. 250 ; Hart. p. 478.

Hemichelidon sibirica Tacz. p. 475 ; Sharpe, Hand-l. iii. p. 204.

a, b. ♂ ♀ ?. Chu-chia Tai, Kirin Province. July 30, 1908.

c. ♀. Chu-chia Tai, Kirin Province. Aug. 9, 1908.

My specimens are typical, with the under parts very white and heavily streaked.

44. *MUSCICAPA LATIROSTRIS* Raffles. Brown Flycatcher.
Hart. p. 477.

Alseonax latirostris Tacz. p. 467; Dresser, p. 252; Ingram, Ibis, 1908, p. 140.

a, b, c. ♀ ♀ ♂. Khingan Mts., alt. 3700 ft. May 29 to June 5, 1908.

d. ♂. Fan-chia Tun, Kirin Province. July 29, 1908.

Iris brownish-black; feet blackish; bill brown-black above.

45. *SIPHIA PARVA ALBICILLA*. Eastern Red-breasted Flycatcher.

Erythrosterna p. albicilla Tacz. p. 469.

Muscicapa albicilla Dresser, p. 256.

Capt. Karpow procured a male near Yingtzu on Sept. 11, 1901, evidently on migration.

46. *MUSCICAPA NARCISSINA XANTHOPYGIA*. Korean Narcissus Flycatcher.

Hart. p. 475.

Xanthopygia tricolor Tacz. p. 480.

a. ♂. Khingan Mts., 3400 ft. June 6, 1908.

47. *TERPSIPHONE INCII* (Gould). Chinese Paradise-Flycatcher.

Dresser, p. 262.

Capt. Karpow procured two examples of this species near Yingtzu, May 10 and 11, 1901.

48. *HIRUNDO RUSTICA* Linn. Barn-Swallow.

Dresser, p. 264.

a. ♀. Chang-chun, Kirin Province. July 15, 1908.

Iris dark brown; feet blackish-brown; bill black.

According to my series of Swallows, all four races of

H. rustica occur in Manchuria, and so fine is the distinction between these forms, that I have had much difficulty in separating some of my examples. One is sufficiently dark on the under parts to be called *tytleri*; a second has the under surface almost white and the complete thoracic band of typical *rustica*; a third agrees perfectly with specimens from N. America, and is therefore *erythrogastra*; while, lastly, I have birds that must be referred to *gutturalis*. There are also intermediate examples in the collection.

This, I think, shews the inadvisability of dividing birds which range as widely as Swallows into a number of ill-defined subspecies; at the meeting-point of their various ranges it is quite impossible to separate the races with anything like certainty, and several of my specimens might excusably be referred to either one of three species or subspecies, viz., *erythrogastra*, *gutturalis*, and *rustica*. However, as I have used trinomials elsewhere in this paper, I have attempted to name my skins according to the subspecific differences described by certain ornithologists.

Dr. Sharpe has very kindly examined the specimen which I have called *H. rustica*, and he agrees with me in considering it typical.

Bianchi also named a Swallow, killed by Capt. Karpow at Yingtzu, Aug. 12, 1901, *H. rustica*; but it must be remembered that in Swallows the under surface usually becomes whiter as the summer advances.

49. *HIRUNDO RUSTICA GUTTURALIS*. Eastern Barn-Swallow.

Tacz. p. 173; Dresser, p. 265; Ingram, *Ibis*, 1908, p. 157.

a, b. ♂ ♀. Chang-chun, Kirin Province. July 6, 1908.

c, d. ♂ ♂. Chu-chia Tai, Kirin Province. Aug. 16, 1908.

e. ♀. Kirin Province. Sept. 17, 1908.

Iris dark brown; feet and bill black.

50. *HIRUNDO RUSTICA ERYTHROGASTRA*.

Dresser, p. 266.

a, b. ♂ ♀. Khingán Mts., alt. 3600 ft. May 29 and June 17, 1908.

c, d. ♂ ♂. Chan-chun, Kirin Province. July 6, 1908.

e. juv. ♀. " " " " "

This and *H. gutturalis* are seemingly the prevailing forms in N. Manchuria. If I recollect rightly, the rufous-breasted birds were those most commonly seen during my journey through the country in 1907.

51. *HIRUNDO RUSTICA TYTLERI*.

Dresser, p. 266.

a. Khingan Mts., alt. 3300 ft. June 15, 1908.

Iris dark brown; feet blackish; bill black.

This specimen has the under parts chestnut and consequently may be referred to the subspecies *tytleri*—a bird which breeds in North-east Asia up to Kamschatka.

52. *HIRUNDO RUFILA DAURICA*. Daurian Red-rumped Swallow.

Tacz. p. 182; Dresser, p. 268.

a-h. ♂ ♀ ♀ ♂ ♂ ♀ ♂. Chang-chun, Kirin Province. July 5-16, 1908.

i. ♀. Kirin Province. Sept. 17, 1908.

Iris brown; feet blackish; bill black.

In 1907 I found this Swallow plentiful along the Trans-Siberian Railway, right across North Manchuria. At almost every station a few pairs were nesting under the roofs of the platform shelters. It is more sociable than the Barn Swallow and will often assemble in small colonies like the House-Martin.

53. *CHELIDON URBICA LAGOPODA*. Oriental House-Martin.

Tacz. p. 184; Dresser, p. 270.

a. ♂. Khingan Mts., alt. 3500 ft. June 17, 1908.

b. ♂. " " alt. 3900 ft. June 23, 1908.

Iris very dark brown; bill black.

This bird is common as a breeding species in N. Manchuria. My collector has sent me three clutches of eggs; these are white and indistinguishable from those of the typical *C. urbica*.

54. *COTILE RIPARIA* (Linn.). Common Sand-Martin.
Dresser, p. 271.

Bianchi records the Common Sand-Martin from South Manchuria and is careful to mention that his example, killed at Yingtzu, July 21, 1901, was not *C. sinensis*. That species doubtless also occurs in Manchuria, as it is said to range into the Ussuri Country, while it winters in the Philippines, S. China, Siam, and Burma.

55. *CHLORIS SINICA* (Linn.). Chinese Greenfinch.
Dresser, p. 284; Hart. p. 64.

a. juv. ♀. Khingan Mts., alt. 3700 ft. May 29, 1908.
Iris dark brown; feet pale brown; bill brownish.

This specimen is in its first plumage, so it is difficult to determine whether or no it belongs to Hartert's subspecies *ussuriensis*.

56. *EOPHONA MELANURA MIGRATORIA* Hart. Migratory Grosbeak.

Hart. p. 59.

a, b. ♂ ♂. Chu-chia Tai, Kirin Province. Aug. 18 and 19, 1908.

This form seems to be very distinct from the typical Chinese bird, both in coloration and in size of bill, and is easily recognisable. It is surprising that it should have remained undescribed for so many years.

57. *PASSER MONTANUS* (Linn.). Tree-Sparrow.

Tacz. p. 617; Dresser, p. 293; Hart. p. 161.

a, b, c. ♀ ♀ ♀. Khingan Mts., alt. 3500 ft. May 5-27, 1908.

d. (Tung-hua Hsien.) June 6, 1886. (*E. J.*)

Iris brown; feet light brown; bill blackish.

Doubtless a common bird throughout Manchuria: it is certainly fairly plentiful along the Railway in North Manchuria.

58. FRINGILLA MONTIFRINGILLA Linn. Brambling.
Dresser, p. 311.

a. ♂. Khingan Mts., alt. 3600 ft. May 10, 1908.
Iris dark brown ; feet brown ; bill dark bluish.

This example is in full summer plumage, with a clean, steely-black head. On the evidence of a single specimen it would be imprudent to assert that this species breeds in the Khingans, but the lateness of the date seems to indicate that a few pairs remain to nest in the mountainous regions of North Manchuria. When visiting Japan in 1907 I thought I observed Bramblings in the Nikko Mountains in May, but I was not able to procure specimens. On the other hand, according to Mr. Owston (*in litt.*), the latest date upon which examples have been taken in that country is March 25th, when some were killed in the Hakone Mountains ; but these males had the feathers of the head distinctly tipped with brown, and consequently were not in full nuptial dress.

Bianchi records a male from Yingtzu, March 20, 1901.

59. LINOTA LINARIA (Linn.). Mealy Redpoll.
Tacz. p. 639 ; Dresser, p. 315 ; Hart. p. 77.

a. ♂. Khingan Mts., alt. 3800 ft. May 3, 1908.
Iris brown ; feet brown ; bill brownish.

Capt. Karpow procured a specimen at Yingtzu, March 24, 1901 (*Bianchi*).

60. CARPODACUS ERYTHRINUS (Pall.). Rose-Finch.

a, b. ♂♂. Khingan Mts., alt. 3400 ft. May 31 and June 11, 1908.

Iris dark brown ; feet dark horn-brown ; bill dark brown above, lighter below.

Being brightly-coloured and rather small, these Manchurian skins might perhaps be referred to the somewhat doubtful subspecies *C. erythrinus grebnitskii* Stejneger. Their wing-measurements are 3.2 in. and 3.35 in.

61. *EMBERIZA RUTILA* Pall. Chestnut Bunting.

Tacz. p. 607 ; Dresser, p. 348 ; Hart. p. 172.

a, b. ♂ ♂. Khingan Mts., alt. 3800 ft. June 1 and 5, 1908.

c. ♀? Chu-chia Tai. Aug. 22, 1908.

Iris brown ; feet horn-brown ; bill brownish.

A specimen was also procured at Yingtzu, May 3, 1901, by Capt. Karpow.

62. *EMBERIZA AUREOLA* Pall. Yellow-breasted Bunting.

Dresser, p. 349 ; Hart. p. 173.

Euspiza aureola Tacz. p. 603.

a-o. 12 ♂, 3 ♀. Khingan Mts., alt. 3400-3600 ft. May 23-31, 1908.

p-w. 5 ♂, 3 ♀. Khingan Mts., alt. 3400-3600 ft. June 1-22, 1908.

x. ♂. Fan-chia Tun, Kirin Province. Sept. 15, 1908.

Iris brown ; feet brownish-horn-coloured ; bill dark brown.

This bird is very common in North Manchuria ; I saw it plentifully all along the Trans-Siberian Railway, the males being fond of sitting conspicuously upon the telegraph-wires, whence they would utter their short but melodious little song.

My collector took two clutches of eggs of this species in the Khingan Mountains.

63. *EMBERIZA SPODOCEPHALA* Pall. Black-faced Bunting.

Tacz. p. 563 ; Dresser, p. 350 ; Hart. p. 176.

a, b. ♂ ♂. Khingan Mts., alt. 3500 ft. May 18, 1908.

c. ♀. Fan-chia Tun, Kirin Province. Sept. 18, 1908.

64. *EMBERIZA LEUCOCEPHALA* Gm. Pine-Bunting.

Tacz. p. 590 ; Dresser, p. 359 ; Hart. p. 169.

a-l. 8 ♂, 4 ♀. Khingan Mts., alt. 3800 ft. April 18-24, 1908.

m-v. 6 ♂, 1 ♀. Khingan Mts., alt. 3500 ft. May 4-5, 1908.

Iris brown; feet horn-coloured; bill dark brownish.

Judging from the large series, the Pine-Bunting must be abundant during the summer months in the mountains of N. Manchuria.

65. *EMBERIZA FUCATA* Pall. Grey-headed Bunting.

Tacz. p. 577; Dresser, p. 360; Hart. p. 186.

a. ♂. Khingan Mts., alt. 3400 ft. June 20, 1908.

b-d. ♂ ♀ and? Chang-chun, Kirin Province. July 5-14, 1908.

e. ♂. Tung-hua Hsien. June 9, 1886. (*E. J.*)

An immature male has been recorded from Yingtzu, Aug. 6, 1901 (*Bianchi*), so that this Bunting apparently inhabits the whole of Manchuria.

66. *EMBERIZA RUSTICA* Pall. Rustic Bunting.

Tacz. p. 572; Dresser, p. 362.

A specimen was shot at Yingtzu, May 2, 1901 (*Bianchi*).

67. *EMBERIZA PUSILLA* Pall. Little Bunting.

Tacz. p. 594; Dresser, p. 363; Hart. p. 188.

a, b. ♂ ♂. Khingan Mts., alt. 3900 ft. May 13 and 14, 1908.

c-g. ♂ ♂ ♀ ♀ ♀. Khingan Mts., alt. 3400-3500 ft. May 18-23, 1908.

Iris brown; feet horn-brown; bill blackish.

68. *EMBERIZA CIOIDES CASTANEICEPS*. Moore's Meadow-Bunting.

Dresser, p. 365; Hart. p. 186.

a. ♂? Hunchun. Nov. 6, 1886. (*E. J.*)

If the subspecies (*E. c. castaneiceps*) be held good, which several authors doubt, Sir Evan James's bird may be referable to it.

69. *EMBERIZA PALLASI* (Cab.). Pallas's Bunting.

Hart. p. 194.

Schœnicla passerina Tacz. p. 600.*Emberiza passerina* Dresser, p. 371.

a. ♂. Khingan Mts., alt. 3400 ft. May 23, 1908.

Iris brown; feet leaden-brown; bill blackish.

This bird, in full nuptial dress, was probably nesting in the Khingans. Its regular breeding-ground is East Siberia, but, according to Kalinowski (Tacz. p. 160), it also breeds sparingly in Corea. It evidently winters in the south of the country, as Capt. Karpow shot three specimens near Yingtzu (♂ ♀ Jan. 1, ♂ Sept. 11, 1901).

70. *CALCARIUS LAPPONICUS* (Linn.). Lapland Bunting.

Tacz. p. 557; Dresser, p. 373; Hart. p. 200.

a. ♂. Khingan Mts., alt. 3500 ft. May 20, 1908.

Iris brown; feet black; bill greenish-yellow.

It is very remarkable to find the Lapland Bunting in Manchuria so late in the season and in full breeding-plumage. One wonders whether a few pairs can remain to nest in the Khingan Mountains. If such prove to be the case, it would be a considerable extension of the breeding-range so far as it is at present known.

71. *ALAUDA ARVENSIS CINEREA* Ehmcke. Ehmcke's Skylark.

Tacz. p. 411; Hart. p. 247.

a. ♂. Khingan Mts., 3800 ft. April 24, 1908.

b, c, d. ♂ ♂ ♂. Khingan Mts., 3400-3500 ft. May 20, 1908.

Iris dark hazel-brown; feet brown; bill dark brown above, lighter below.

In coloration these Skylarks belong to the light race known as *A. cantarella* Bp. from South-east Europe, but they are perhaps rather greyer, and the measurements are certainly small (the wings average 4.2 in.). I have therefore referred them to Ehmcke's subspecies, retained by Hartert in his 'Vögel der paläarktischen Fauna.' In the British

Museum there are specimens, collected by Seebohm at Krasnoyarsk, that agree perfectly with mine. Hartert gives the distribution of this race as follows:—"Must be a breeding bird in West Siberia, at least as far (east) as Krasnoyarsk, Turkestan; Persia to Palestine (?). In winter it is common on the north side of the Caucasus, and as far as Algeria, Tunis, and Egypt.

72. *ALAUDA ARVENSIS PEKINENSIS*.

Hart. p. 248.

Bianchi records this form of Skylark from Yingtzu (Jan. 24 and ♂ Oct. 10, 1901).

73. *GALERIDACRISTATA LEANTUNGENSIS*. Liao-Tung Crested Lark.

Hart. p. 236.

Capt. Karpow shot a male Crested Lark at Yingtzu on Oct. 10, 1901, which Bianchi has named *leantungensis*.

74. *SPODIOPSAR CINERACEUS* (Temm.). Grey Starling.

Tacz. p. 544; Dresser, p. 402; Ingram, Ibis, 1908, p. 151.

a. ♂. Khingan Mts., alt. 3600 ft. April 25, 1908.

b, c. ♂ ♀ juv. Chang-chun, Kirin Prov. July 6, 1908.

d. ♂ juv. Chu-chia Tai, Kirin Prov. Aug. 17, 1908.

e, f. ♂ ♂. (Yung Ling.) June 2, 1886. (E. J.)

Adult: iris yellowish-brown; feet bright yellow; bill orange.

Immature: iris brown; feet and bill yellow.

Bianchi also records specimens from Yingtzu in the extreme south, so that this Starling is probably found throughout Manchuria.

75. *NUCIFRAGA CARYOCATACTES MACRORHYNCHA* Brehm.

Large-billed Nutcracker.

Tacz. p. 540; Dresser, p. 409; Hart. p. 26.

a. ♀. Chang Pei-shan Mts. July 12, 1886.

b, c. ♂ ♀. Wha-pi-Hoa Forests, Chang Pei-shan Mts. July 18, 1886.

"Iris dark brown; feet and legs black" (E. J.).

76. *GARRULUS BRANDTI* Eversm. Brandt's Jay.

Tacz. p. 509; Dresser, p. 413; Hart. p. 33.

a, b. ♂ ♀. Khingan Mts., alt. 3700 ft. May 8, 1908.

c. ♀. Hei-li Ho Forests, Chang Pei-shan. July 7, 1886.

d. ♂. Ninguta. (Oct. 26.)

e. ♀. Near O-mo-so. (Nov. 18.)

f. ♀. Chang Tsai Ling. (Nov. 19.)

Iris greyish-blue; feet brown; bill black.

Going through a large series of this Jay, I find that it shews a strong tendency to become generally paler and larger towards the eastern side of its range. Compared with specimens from the neighbourhood of Krasnoyarsk, my birds have the heads light foxy-brown instead of dark chestnut, the difference being especially marked towards the base of the bill and on the nasal plumes, the latter being sandy white in my specimens. The wing-measurements of the Manchurian birds average about 6·9 in. (in the largest male 7·35 in.).

Examples from the mouth of the Amur and Hokkaido agree perfectly with mine.

Brandt's Jay is probably a resident species in Manchuria.

77. *CYANOPICA CYANUS* (Pallas). Eastern Blue Magpie.

Hart. p. 23.

Cyanopolius cyanus Tacz. p. 511; Dresser, p. 416.

a. ♀. (Lo-chuan K'ou Valley.) June 19, 1886.

b. ♂. Lao-sung Lung. (Oct. 30) 1886.

c. ♀. Hun-chun. (Nov.) 1886.

Iris brown; feet black (*E. J.*).

78. *PICA BACTRIANA* Bp. Eastern Magpie.

Hart. p. 21.

Pica leucopterus Gould, B. of Asia, vol. v.; Dresser, p. 418.

a-d. ♀ ♀ ♀ ♂. Chan-chun, Kirin Province. July 5-13, 1908.

e, f. ♀ ♂. Chan-chun, Kirin Province. Aug. 1 and 13, 1908.

g-k. ♂ ♀ ♂ ♂ ♀. „ „ „ „ Sept. 2-29, 1908.

All my specimens appear to belong to the subspecies *bactriana*. Sir Evan James remarks:—"The commonest bird in Manchuria is the Magpie, the sacred bird, which goes in large flocks and is very tame. They were fond of teasing Rattler (Sir Evan's dog), settling down and hopping about just in front of him, and behind him, and all around him, croaking loudly and fluttering away just as the dog thought he had got one, and driving him perfectly wild."

79. *PICA PICA SERICEA*. Chinese Magpie.

I include this bird on the authority of M. Bianchi, who records a specimen from Yingtzu, killed Feb. 10, 1901.

80. *COLÆUS DAURICUS* Pall. Daurian Jackdaw.

Tacz. p. 521; Dresser, p. 419; Hart. p. 18.

a, b. ♂ ♀. Khingan Mts., alt. 3800 ft. April 24, 1908.

c-j. ♀ ♂ ♂ ♂ ♀ ♂ ♀ ♀. Khingan Mts., alt. 3400 ft. May 1-31, 1908.

k, l. ♂ ♂. Fan-chia Tun, Kirin Province. Sept. 11 and 12, 1908.

Iris blackish-brown; feet and bill black.

This Jackdaw is a common bird in Manchuria: I observed it frequently from the train when I crossed that country from Vladivostock to Europe.

81. *COLÆUS NEGLECTUS* (Schleg.). Oriental Jackdaw.

Tacz. p. 524; Dresser, p. 420; Hart. p. 18.

a, b. ♂ ♂. Khingan Mts., alt. 3500 ft. May 6 and 24, 1908.

c, d. ♀ ♂. „ „ alt. 3400 ft. June 1 and 2, 1908.

Iris black-brown; feet and bill black.

82. [CORVUS TORQUATUS Less. White-breasted Crow.

I include this bird on the authority of Sir Evan James, who states ('The Long White Mountain,' p. 270) that "White-breasted Crows were common." There is no reason why *C. torquatus* should not occur in Manchuria. I observed it plentifully round Shanghai in April 1907.]

83. CORVUS CORONE ORIENTALIS. Eastern Carrion-Crow.

Tacz. p. 533; Dresser, p. 421; Hart. p. 12.

a. ♂. Khingan Mts., alt. 3400 ft. June 9, 1908.

Iris dark brown; bill and feet black.

From Yingtzu, S. Manchuria, Bianchi records a specimen of *C. corone* (♂, Jan. 9, 1901). He possibly does not consider the eastern race worthy of subspecific rank, and most likely his bird is *C. corone orientalis*. Sir Evan James writes that Crows are common in S. Manchuria.

84. CORVUS MACRORHYNCHUS JAPONENSIS. Japanese Jungle-Crow.

Tacz. p. 530; Dresser, p. 422; Ingram, Ibis, 1908, p. 149.

a. Near Hunchun. [Nov. 6, 1886.] (*E. J.*)

Compared with Japanese specimens, the bill is not so large in Sir Evan James's bird.

85. CORVUS CORAX USSURIANUS. Ussurian Raven.

Tacz. p. 527; Dresser, p. 423; Hart. p. 4.

a. ♂. Khingan Mts., alt. 3800 ft. June 15, 1908.

Iris dark brown; bill and feet black.

This example was moulting heavily when shot, so I am unable to give its wing-formula; however, there seems little doubt that it belongs to this subspecies.

86. CORVUS FRUGILEGUS PASTINATOR. Eastern Rook.

Tacz. p. 537; Dresser, p. 427; Hart. p. 14.

a. ♂. Chang-chun, Kirin Province. July 13, 1908.

An immature bird. Bianchi received a skin from Yingtzu, killed March 6, 1901.

87. *CYPSELUS PACIFICUS* (Latham). Siberian Swift.

Tacz. p. 168 ; Dresser, p. 430 ; Ingram, Ibis, 1908, p. 161.

Although not represented in either collection, this bird is no doubt common in parts of N. Manchuria. I found it abundant at Vladivostock in June, and also observed it during my journey along the Trans-Siberian Railway.

88. *CAPRIMULGUS JOTAKA* T. & Schl. Indian Nightjar.

Tacz. p. 162 ; Dresser, p. 434 ; Ingram, Ibis, 1908, p. 162.

a. S. Manchuria.

This Nightjar was procured near Yingtzu, April 30, 1901 (*Bianchi*).

89. *PICUS MARTIUS* Linn. Great Black Woodpecker.

Tacz. p. 699 ; Dresser, p. 437.

a. ♀. Khingan Mts. April 29, 1908.

b, c. ♀ ♀. Khingan Mts., 3600 ft. and 3700 ft. May 19 and 30, 1908.

d. ♂ juv. Hua-pi Ho. July 16, 1886. (*E. J.*)

Iris pale yellow ; feet blackish.

Sir Evan James shot his immature bird on the Hua-pi Ho (or Khu-i-fa River), a tributary of the Sungari, about 40 miles south of Kirin.

90. *DENDROCOPUS MAJOR*. Greater Spotted Woodpecker.

Dresser, p. 438 ; Hartert, Nov. Zool. vii. p. 529.

a, b. ♀ ♀. Near Mendukei, Khingan Mts., 3800 ft. May 14, 1908.

c-h. ♂ ♂ ♂ ♂ ♀ ♀. Near Mendukei, Khingan Mts., 3500-3700 ft. May 19, 1908.

i. ♂. Near Mendukei, Khingan Mts., 3600 ft. May 30, 1908.

Iris mahogany or red-brown ; feet blackish ; bill bluish-black.

My Manchurian Greater Spotted Woodpeckers may perhaps be referred to the race known as *D. major cissa*, for they have the under parts almost pure white and are tolerably

large birds, their wing-measurements varying from 5.4 in. to 5.65 in. I quite agree with Dr. Hartert when he states that this form is hardly distinguishable from the true *D. major* as represented in N. Europe. My birds are almost exactly similar to specimens from that country.

91. *DENDROCOPUS MINOR*. Lesser Spotted Woodpecker.

Tacz. p. 103 ; Dresser, p. 444.

a, b. ♂ ♀. Khingan Mts., alt. 3800 ft. April 18 and 23, 1908.

c. ♂. Khingan Mts., alt. 3900 ft. April 29, 1908.

d. ♂. „ „ alt. 3500 ft. April 30, 1908.

e. ♀. „ „ alt. 3700 ft. May 2, 1908.

f. ♀. „ „ alt. 3600 ft. May 30, 1908.

g. ♀. „ „ alt. 3700 ft. June 8, 1908.

Iris red-brown ; feet blackish ; bill bluish-black.

In my birds the under surface is almost pure white and, in some examples, the under parts are practically free from striations ; the measurements are also fairly large. Consequently these Manchurian skins may be referred to the subspecies *D. m. pipra*.

Hargitt gives the distribution of this race (Cat. B. xviii. p. 216) as "from the South Ural Range, across Siberia north of about 55° lat., and into Kamtschatka and Behring Island," but in a footnote he explains that, for want of specimens and absence of information on the subject, he cannot be precise as to the range. Having gone through the extensive series now in the British Museum, I find that the white-bellied race, in the extreme east, extends far south of this latitude. As proof of this, there are good examples from the Ussuri Country as well as mine from the Khingan Mountains. West of the Urals the bird ranges into Lapland. A dingy-bellied form reappears in the Japanese Islands that is very like the typical *D. minor*. The ranges of the two races undoubtedly overlap to a considerable extent, for Taczanowski describes skins from Dauria that appear to approximate closely to the true *D. minor*.

92. DENDROCOPUS LEUCONOTUS (Bechst.). White-backed Woodpecker.

Tacz. p. 701; Buturlin, Mitt. d. Kauk. Mus. Bd. iii. (Tiflis).

a, b. ♂ ♀. Khingan Mts., 3800 ft. May 29, 1908.

c. ♂. Khingan Mts., 3400 ft. June 16, 1908.

d. ♂. Shin hon? June 16, 1886.

e. juv. ♂. Pai-shan Range. July 7, 1886.

f. ♀. Chang-tsai Ling, 80 miles E. of Kirin. (Nov. 19, 1886.)

g. ♂. Sansing. (Oct. 13, 1886.)

Iris mahogany or red-brown; feet and bill bluish-black.

This Woodpecker is evidently found throughout the country, as Sir Evan James also met with it, and in a number of different localities. My Manchurian birds seem to be typical, both in measurement and coloration, but one of Sir Evan's appears to belong to the whiter race known as *D. l. cirris* Pall.

Buturlin (*t. c.* p. 60) has divided *D. leuconotus* into eight forms, but the differences mentioned by him in most cases appear to me to be very trifling. I have not yet examined specimens from China, but "a black cross-band behind the ears" does not seem to be a very distinctive character, as it is subject to some variation. In one or two of Sir E. James's specimens this band is well-developed.

About the same time as, or a little after, the appearance of Buturlin's paper, Austin Clark described what he thought were two new subspecies from Corea and the Ussuri Country (Proc. U.S. Nat. Mus. xxxii. p. 470). He called the latter *ussurianus*, a name, curiously enough, also used by Buturlin in describing one of his forms from the same country. But the two descriptions are very different. Buturlin (who examined about twelve specimens) says that the "chest and breast are roseate-brownish, or dirty isabelline, resembling those of *D. lilfordi*." Clark (who only had one skin at his disposal) describes his *ussurianus*

as having "the under parts pure white." This, I think, conclusively proves the unsoundness of dividing the White-backed Woodpecker into innumerable races, especially when there is but little material at hand to work upon. At the most, I consider ornithologists ought not to recognise more than two or three geographical races of this Woodpecker, and even then the variations are not very well-marked.

93. *PICOIDES TRIDACTYLUS CRISSOLEUCUS*. Northern Three-toed Woodpecker.

Tacz. p. 722; Dresser, p. 452; Rothschild, Nov. Zool. ix. p. 162.

a. ♂. Khingán Mts., alt. 3800 ft. April 24, 1908.

b, c. ♂ ♂. Khingán Mts., alt. 3700 ft. May 19 and 31, 1908.

Iris red-brown; feet black; bill bluish-black.

My specimens seem to belong to the subspecies *crissoleucus*, but one has the sides more or less distinctly streaked. The yellow patch on the top of the head is not very extensive.

94. *HYPOPICUS POLIOPSIS* (Swinh.). Brown-breasted Woodpecker.

Hargitt, Cat. B. xviii. p. 201; Bianchi, Ann. Mus. Zool. St. Petersb. 1902.

a. ♂. Chu-chia Tai, Kirin Province. Aug. 19, 1908.

b. sex? Fun-chia Tun, Kirin Province. Sept. 9, 1908.

c, b. ♀? ♀? Fun-chia Tun, Kirin Province. Sept. 11 and 16, 1908.

I cannot find any ground for Hargitt's statement (*op. cit.* p. 201) that in the adult male there is a "spot of red in the centre of the chest"; as a matter of fact there is hardly ever any trace of it even in the immature bird, as may sometimes be observed in the closely-allied Indian species *H. hyperythrus*. Nor do I consider the colour of the under mandible and nasal plumes reliable specific characters. The yellow in the under mandible is probably the outcome of age, although not entirely so. There is an adult male *H. poliopsis* in the Styan collection from Newchwang with a

decidedly yellowish lower mandible and pure black nasal plumes, while there is a young *hyperythrus* in the British Museum from the N.W. Himalayas with the bill almost entirely black and the nasal plumes buff, tipped with black. I believe the only constant difference between these two closely-allied Woodpeckers is the colour of the under parts. This is bright rufous-chestnut in the Indian bird and brown to sooty-brown in the Chinese form. In the latter the black on the back is perhaps purer and more intense than in *H. hyperythrus*. This being the case, all the birds from the Styan collection (now in the British Museum) are *H. poliopsis*, and its range would therefore extend from Yun-nan and N.W. Sechuen across North China into South Manchuria. But all my skins are unusually dusky in shade, and perhaps the Manchurian bird may ultimately prove to be subspecifically distinct, in which event I would suggest the name *manchuricus*. Bianchi describes Captain Karpow's specimen from Yingtzu as having the under parts "blackish" (*tom. cit.*). The only thing that deters me from describing the Manchurian bird at once is the fact that immature examples are always darker and more dingy than the adults, but, on the other hand, young birds may be easily recognised by the lighter shade of the crimson crown and their dusky throat, neck, and breast, profusely mottled with large cream-coloured spots. In one of my specimens the under surface is blackish-brown and probably resembles that collected by Capt. Karpow. The bill seems to be variable: the culmen of an adult male measures 1.16 in.; that of one of the young birds a fraction under 1 in.

95. *GEVINUS CANUS* (Gm.). Grey-headed Green Woodpecker.

Dresser, p. 456.

a, b. ♂ ♀. Shing-king. June 6, 1886.

c. Chang-tsai. (*E. J.*)

96. *IYNX TORQUILLA* (Linn.). Wryneck.

Tacz. p. 727; Dresser, p. 457.

a-i. Five ♂, four ♀. Khingan Mts. May 13 to June 14, 1908.

Iris brown; feet greenish-drab; bill greenish-horn-coloured.

97. *ALCEDO ISPIDA* Linn. Common Kingfisher.

Tacz. p. 194; Dresser, p. 458.

Sir Evan James procured a Common Kingfisher in South Manchuria.

98. *HALCYON COROMANDUS* (Lath.). Ruddy Kingfisher.

Dresser, p. 460.

a. ♀. Lo-chuan K'ou Valley. June 20, 1886.

Iris blackish; bill coral red (*E. J.*).

The lower half of Manchuria probably forms the northern limit of this bird's range on the continent. In Japan it rarely reaches Yezo in the summer. The more tropical examples are rather darker and richer in coloration.

99. *EURYSTOMUS CALONYX* Sharpe. Oriental Broadbill.

E. orientalis, Tacz. 189; Dresser, p. 464.

a. ♂. Forests of Chang Pai-shan Mts. July 20, 1886.

Iris red; bill and feet coral-red (*E. J.*).

100. *UPUPA EPOPS* Linn. Hoopoe.

Dresser, p. 467.

a-d. Four ♂. Chang-chun, Kirin Province. July 6-14, 1908.

e-t. Eight ♂, eight ♀. Fan-chia Tun, Kirin Province. July 22-28, 1908.

Iris dark brown; feet blackish; bill black.

All the examples in my collection are from the central part of Manchuria, and as no birds were procured in the north, it seems that the Hoopoe only inhabits the southern half of the country.

101. *CUCULUS CANORUS* Linn. Common Cuckoo.

Tacz. p. 685; Dresser, p. 468.

a. ♀. Khingan Mts., alt. 3400 ft. May 31, 1908.

b-i. Six ♂, two ♀. Khingan Mts., alt. 3400-3900 ft. June 1-23, 1908.

j, k. ♂ ♀. Chang-chun, Kirin Province. July 6 and 16, 1908.

l. ♀. Chu-chia Tai, Kirin Province. Aug. 21, 1908.

m-o. ♂ ♂ ♀. Fan-chia Tun, Kirin Province. Sept. 2-17, 1908.

Iris yellowish-brown; feet yellow; bill blackish.

102. *CUCULUS INTERMEDIUS* Vahl. Himalayan Cuckoo.

C. saturatus Tacz. p. 689; Dresser, p. 470; Ingram, Ibis, 1908, p. 160.

a. ♀. Khingan Mts., alt. 3600 ft. May 29, 1908.

b. ♀. Chu-chia Tai, Kirin Province. Aug. 18, 1908.

Iris and feet yellowish; bill bluish-black.

103. *NYCTALA TENGMALMI* (Gm.). Tengmalm's Owl.

Tacz. p. 133; Dresser, p. 482.

a. ♂. Khingan Mts., alt 3700 ft. May 19, 1908.

Iris yellow; feet greyish; bill greenish.

This bird was probably killed on the south-eastern limits of its range; Dresser says that it is found in Siberia east to the Baikal.

104. *ASIO ACCIPITRINUS* (Pall.). Short-eared Owl.

Tacz. p. 157; p. 484.

a. ♂. Khingan Mts., alt. 3800 ft. April 20, 1908.

Iris yellow; feet greyish; bill bluish-black.

105. *SCOPS GIU STICTONOTA*. Chinese Scops Owl.

Scops japonica Tacz. p. 150; Dresser, p. 488.

a. ♂. Khingan Mts., alt. 3500 ft. May 25, 1908.

106. *NINOX SCUTULATA JAPONICA*. Japanese Hairy Owl.

Dresser, p. 495.

Sir Evan James procured three specimens of this Owl, but as the labels are missing I cannot give any data.

107. *CIRCUS MELANOLEUCUS* (Forster). Pied Harrier.
 Tacz. p. 120; Dresser, p. 508.
a-d. ♂ ♂ ♂ ♀. Khingan Mts., alt. 3400-3500 ft.
 May 21 and 27, 1908.
e, f. ♂ ♂. Khingan Mts., alt. 3400 ft. June 2 and 14,
 1908.
g. ♂. Chu-chia Tai, Kirin Province. Aug. 1, 1908.
h-l. ♀ ♂ ? ♀ ♂. Fan-chia Tun, Kirin Province. Sept.
 3 and 14, 1908.
 Iris bright yellow; feet brownish yellow; bill black.
 This Harrier is evidently a common summer visitor to
 Manchuria.
108. *BUTEO VULGARIS PLUMIPES*. Eastern Buzzard.
 Tacz. p. 64; Dresser, p. 509.
a-c. ♂ ♀ and?. Khingan Mts., alt. 4000 ft. June 1
 and 4.
 Iris brown; legs dull yellow; bill black.
 My collector has sent me an egg, with imperfect data, that
 has every appearance of being a Buzzard's, and I therefore
 attribute it to this species.
109. *ASTUR PALUMBARIUS* (Linn.). Goshawk.
 Tacz. p. 98; Dresser, p. 529.
a. ♂ imm. N. Sansing. Oct. 13, 1886. (*E. J.*)
110. *ACCIPITER NISUS* (Linn.). Sparrow-Hawk.
a-c. ♂ ♂ ♀. Khingan Mts., alt. 3500-3800 ft. May 15
 and 27, 1908.
d. ♂ juv. Khingan Mts., alt. 3400 ft. May 23, 1908.
 Iris orange-yellow; feet yellow; bill bluish-black.
111. *ACCIPITER VIRGATUS GULARIS*. Japanese Sparrow-
 Hawk.
 Tacz. p. 110; Dresser, p. 532.
a. ♂. Khingan Mts., alt. 3600 ft. May 20, 1908.
 Iris orange; feet yellow; bill blackish.

112. *MILVUS MELANOTIS* T. & S. Black-eared Kite.

Tacz. p. 46; Dresser, p. 536; Ingram, Ibis, 1908, p. 163.

a. ♂. Khingan Mts., alt. 3500 ft. May 15, 1908.

Iris brown; feet greyish-drab; bill bluish-black.

113. *FALCO ÆSALON* Tunstall. Merlin.

Tacz. p. 87; Dresser, p. 547.

a. Kirin Province. Sept. 17, 1908.

Capt. Karpow also procured a Merlin, a male, at Yingtzu, on Oct. 15, 1901.

114. *FALCO SUBBUTEO* Linn. Hobby.

Tacz. p. 84; Dresser, p. 548.

a. ♂. N. Kirin. (*E. J.*)

Sir Evan James was at Kirin in August and November, 1886; this bird was doubtless killed during his first visit, but no date is given on the label.

115. *ERYTHROPUS AMURENSIS* (Radde). Radde's Red-legged Falcon.

Falco amurensis Dresser, p. 551.

a. ♂. Fan-chia Tun, Kirin Province. July 25, 1908.

b-e. ♂ ♂ ♀ ♀. Chu-chia Tai, Kirin Province. Aug. 9-21, 1908.

f, g. ♂ ♂. Fan-chia Tun, Kirin Province. Sept. 9 and 18, 1908.

116. *CERCHNEIS TINNUNCULUS* (Linn.). Common Kestrel.

Tacz. p. 95; Dresser, p. 552.

a. ♀. Khingan Mts., alt. 3900 ft. April 22, 1908.

b. ♂. „ „ alt. 3600 ft. June 1, 1908.

Iris brown; feet yellow; bill bluish-horn-coloured.

117. *PANDION HALIAËTUS* (Linn.). Osprey.

Tacz. p. 52; Dresser, p. 554.

Sir Evan James's collections include an Osprey shot in South Manchuria.

118. PHALACROCORAX, sp inc. Cormorant.

At the junction of the Sungchiang and the Sungari Rivers, Sir E. James observed an enormous colony of Herons and Cormorants nesting together in willow-trees ('The Long White Mountain,' p. 275). In a letter to me he describes these nests as being placed "on trees growing in deep mud and bulrushes and were unapproachable. Some of the trees were so smothered with the birds' droppings that they seemed to have been killed." These Cormorants were most likely *Ph. carbo*, but they may, of course, have been *Ph. filamentosus* (T. & S.).

119. ARDEA CINEREA Linn. Common Heron.

Tacz. p. 980 ; Dresser, p. 564.

a. ♂? Fan-chia Tun, Kirin Province. Sept. 10, 1908.

In 'The Long White Mountain' (p. 274) Sir Evan James writes as follows:—"Descending from the ridge, we passed through richly cultivated valleys till we reached the Sungchiang, one of the largest affluents of the Sungari. Near the junction was the finest heronry I ever saw. Thousands of Herons and Cormorants were nesting together in the willow-trees."

120. BOTAURUS STELLARIS (Linn.). Bittern.

Tacz. p. 991 ; Dresser, p. 578.

A male was shot at Yinko, April 7, 1901 (*Bianchi*).

121. ANSER SEGETUM MENTALIS. Thick-billed Bean-Goose.

Alphéraky, 'Geese of Eur. and Asia,' p. 130.

This is a somewhat doubtful subspecies, of which seemingly only three skins are known to ornithologists—one from Japan (now in the British Museum, and Oates's type), one from Bering Island, and lastly one from Yingtzu or Yinko, South Manchuria (not *North* Manchuria as stated by Alphéraky, p. 131, when referring to this bird). In his 'Geese

of Europe and Asia,' Alphéraky writes: "I am rather inclined to see in these thick-billed Geese only very old individuals of the Siberian Bean-Goose which have reached the limit of their growth. I even think that perhaps all such thick-billed Geese will prove to be exceptionally old ganders of this species."

The Yingtzu specimen was procured by Capt. Karpow on February 27, 1901.

122. *CYGNUS BEWICKI* Yarrell. Bewick's Swan.

Tacz. p. 1118; Dresser, p. 600.

Bianchi records this Swan from Yingtzu, March 10, 1901.

123. *TADORNA CORNUTA* S. G. Gm. Common Sheldrake.

Tacz. p. 1124; Dresser, p. 601.

An immature bird was procured by Capt. Karpow in S. Manchuria, Oct. 5, 1901 (*Bianchi*).

124. *ÆX GALERICULATA* (Linn.). Mandarin Duck.

Tacz. p. 1127; Dresser, p. 603.

Bianchi records a male from Yingtzu killed March 31, 1901. Sir Evan James says (*in litt.*): "I shot some beautiful specimens of the Mandarin Duck, but did not think it worth while preserving them, as they are so well known and I thought I could get a specimen any time; but I only saw them at one place, near Shin-kin."

125. *ANAS BOSCHAS* Linn. Mallard.

From N. Manchuria my collector has sent home some eggs that possibly belong to this species, as they agree perfectly with examples in the British Museum collection. The bird is very common in the Ussuri Country and there is no reason to suppose that it is not equally so in Manchuria. Sir Evan James shot a number for food, but did not preserve any skins.

126. *EUNETTA FALCATA* (Georgi). Falcated Teal.
 Tacz. p. 1135 ; Dresser, p. 608.
a, b. ♂ ♂. Khingan Mts., alt. 3300 ft. June 6 and 14,
 1908.
 Iris black; feet plumbeous; bill black.
 A male has also been procured at Yingtzu, March 2,
 1901 (*Bianchi*).
127. *NETTION CRECCA* (Linn.). Common Teal.
 Tacz. p. 1141 ; Dresser, p. 611.
a. ♂. South Manchuria. (*E. J.*)
Bianchi also records it from Yingtzu, March 9, 1901.
128. *NETTION FORMOSUM* (Georgi). Baikal Teal.
 Dresser, p. 612.
Anas formosa Tacz. p. 1138.
 Capt. Karpow procured two specimens in South Manchuria,
 February and March 1901 (*Bianchi*).
129. *DAFILA ACUTA* (Linn.). Pintail.
 Tacz. p. 1147 ; Dresser, p. 613.
 A female was shot at Yingtzu, March 1, 1901 (*Bianchi*).
130. *FULIGULA AFFINIS MARILOIDES*. Asiatic Scaup-
 Duck.
Fulix marila Tacz. p. 1164.
Aethya marila Dresser, p. 618.
Bianchi records this Duck from the mouth of the Liao
 River, March 15, 1901.
131. *ÆTHYIA FULIGULA* (Linn.). Tufted Duck.
Fulix cristata Tacz. p. 1167.
Aethya fuligula Dresser, p. 619.
 Capt. Karpow procured a specimen at Yingtzu, March 6,
 1901.

132. NYROCA BAERI (Radde). Baer's Duck.

Fulix baeri Tacz. p. 1169.

Æthya baeri Dresser, p. 621.

A male was procured at Yingtzu by Capt. Karpow on April 15, 1901 (*Bianchi*).

133. TURTUR ORIENTALIS (Lath.). Chinese Turtle-Dove.

Turtur rupicola Tacz. p. 733 ; Dresser, p. 648.

a. ♂. Fan-chia Tun, Kirin Province. Sept. 4, 1908.

b. ♂. Hang-lung Pass. June 23, 1886. (*E. J.*)

"Feet and iris dull red."

134. PHASIANUS TORQUATUS KARPOWI Buturlin. Korean Pheasant.

Buturlin, *Ibis*, 1904, p. 405.

Mr. Buturlin described this subspecies of *P. torquatus* from a specimen procured by Capt. Karpow on Jan. 20, 1901, near Te-lin. He gives its distribution, mostly on the authority of the last-named gentleman, as extending "through Corea (rarely south of Seoul), and through Southern Manchuria, north to Ghirin, west to the river Lao-khe, and south to Lao-yang. North of Ghirin, and in the most north-easterly parts of Corea, it meets with *P. alpherakyi*."

135. PHASIANUS TORQUATUS ALPHERAKYI Buturlin. Sungarian Pheasant.

Buturlin, *Ibis*, 1904, p. 399.

Mr. Buturlin says that great quantities of these birds have been sent to the markets of Moscow, St. Petersburg, and London from Harbin, and I suppose it is on this knowledge that he states that it inhabits the central and northern parts of Manchuria. He has a specimen from Lake Hanka in his collection. I have not examined examples of this or the foregoing species of Pheasant, so cannot express any opinion on the validity of their subspecific rank.

Near Sansing Sir Evan James found a locality in which Pheasants were remarkably abundant, the birds being found

in low oak scrub close to cultivated ground. These were doubtless the Sungarian Pheasant. ('The Long White Mountain,' p. 328.)

136. [CROSSOPTILUM MANTCHURICUM Swinh. Manchurian Snow-Pheasant.

Elliot, Mon. Phas. vol. i.; Dresser, p. 672.

Although this bird is called *mantchuricum*, and, indeed, there is no reason why it should not come from Manchuria, I can find no positive proof of its ever having occurred in that country. Swinhoe, when he first described the bird (P. Z. S. 1862) said, "if I am rightly informed our specimen hails from Manchuria"; and I presume it was upon the strength of this same skin, doubtless brought to him by a native, that he informed Elliot (*tom. cit.*) that it was found in Manchuria. As specimens have since come from the Pe-chi-li Mountains, North China, there is every probability of its occurring also in Manchuria, but on our present knowledge it cannot be definitely included in the avifauna of that country. I can find no trace of Swinhoe's female specimen from which he originally described the species: it is not in the British Museum, which now contains most of his collection.]

137. PERDIX DAURICA (Pall.). Bearded Partridge.

Tacz. p. 776; Dresser, p. 683.

a. ♂. Pe-tu-na, Central Manchuria. (Sept.) 1886.

Sir Evan James writes ('The Long White Mountain,' p. 270) that "Partridges are not so common." Very large numbers are sent to the European markets every winter, but these may perhaps come from Dauria.

138. COTURNIX COMMUNIS (Linn.). Common Quail.

Tacz. p. 779; Dresser, p. 685.

Bianchi, Ann. Mus. Zool. St. Pétersb. 1902.

a. ♂. Khingan Mts., alt. 3400 ft. June 6, 1908.

b, c. ♂♂ (*C. communis* × *japonica*). Khingan Mts., alt. 3400 ft. June 11 and 15, 1908.

d. ♀. Chu-chia Tai, Kirin Province. Aug. 20, 1908.

Iris dark brown; feet flesh-brown; bill brownish.

Of a series of Quails, only two are the pure-bred *communis*, two are obviously hybrids (with brick-red throats and black anchor-marks), while the other two are typical *C. japonica*.

Bianchi mentions *C. communis* from Yingtzu in the south, so that the bird must inhabit the whole of Manchuria.

139. COTURNIX JAPONICA T. & S. Japanese Quail.

Tacz. p. 780; Dresser, p. 686; Ingram, Ibis, 1908, p. 168.

a, b. ♂ ♂. Khingan Mts., alt. 3400 ft. June 15 and 20, 1908.

Iris dark brown; feet fleshy brown; bill blackish-brown.

140. LYRURUS TETRIX (Linn.). Black Grouse.

Tacz. p. 766; Dresser, p. 698.

a, b. ♂ ♂. Khingan Mts., alt. 3800 ft. April 19 and 22, 1908.

c, d. ♂ ♀. „ „ alt. 3700–3900 ft. May 19, 1908.

e. ♂. „ „ alt. 3700 ft. June 6, 1908.

♂ ♀. South Manchuria. 1886.

Iris very dark brown; feet blackish; bill black.

Blackgame must be abundant in parts of Manchuria. I quote from Sir Evan James ('The Long White Mountain,' p. 343):—"On Nov. 2 we arrived at Ssü chan. . . . It was situated on the banks of a rivulet, on the other side of which was a grove of willow-trees about a mile in length. What was our joy to see these trees full of Black Grouse! We instantly crossed by a narrow, rickety bridge, . . . and found them crowded fearlessly on the boughs. So we opened fire on them. The noise at first was only sufficient to make them fly a few yards to the next tree and wait to be shot at again, but eventually they began to get scared." Again he describes them as "sitting upon trees as tame as barndoor fowls."

141. TETRASTES BONASIA (Linn.). Hazel-hen.

a, b, c. ♂ ♂ ♂. Khingan Mts., alt. 3500-3800 ft. April 21-29, 1908.

d, e. ♂ ♂. „ „ alt. 3500 ft. and 3900 ft. May 6, 1908.

f. ♀. Ssü-tao, Chiang Forest. June 17, 1886.

g. Juv. „ „ „ „ „ „

h. ♂. Hang Lung Pass. June 22, 1886.

Iris dark brown; feet very dark plumbeous-brown; bill black.

The five males from the Khingans are exceptionally grey above, while there is much white on the under parts; on the other hand, in Sir Evan James's specimens rufous and brown are the prevailing colours. One of his birds, killed June 22nd, is only half-grown.

142. TURNIX BLANFORDI Blyth. Blanford's Hemipode.

Bianchi, Ann. Mus. Zool. St. Pétersb. 1902.

a. ♂. Piu-chien San, Kirin Province. July 27, 1908.

b. ♂. June 18, 1886.

Iris white; feet yellow.

Both these Manchurian specimens are very pale and grey above, without a vestige of rufous on the nape or back. They are probably quite old birds, as all the males in the British Museum are more or less mottled with red-brown on the nape; but, of course, the males are never so conspicuously marked as the adult females. The rufous is apparent in males killed as late as May and June, that is to say, in birds that must have been at least ten or eleven months old when shot. It seems to me probable that the rufous is not entirely lost until the second or third season.

Bianchi records this species from Port Arthur (Sept. 20, 1901).

Forty miles south of Sansing, Sir Evan James speaks of a "Grey Quail" being plentiful in places. He probably refers to the present species.

143. PORZANA PUSILLA (Pall.). Pallas's Rail.

Tacz. p. 997; Dresser, p. 708.

a. ♂. Khingan Mts., alt. 3300 ft. June 6, 1908.

Iris deep reddish-orange; feet greenish-drab; bill greenish.

This bird has also been procured at Yingtzu, a young male having been shot by Capt. Karpow on Sept. 10, 1901 (*Bianchi*).

144. FULICA ATRA Linn. Common Coot.

I include the Coot on the authority of Bianchi, who records a specimen from South Manchuria, March 10, 1901.

145. GRUS COMMUNIS Bechst. Common Crane.

Tacz. p. 796; Dresser, p. 718.

This and the next species were observed commonly near Tsitsihar by Sir Evan James when he visited that town in September 1886 ('The Long White Mountain,' p. 299).

146. GRUS VIRGO (Linn.). Demoiselle Crane.

Tacz. p. 810; Dresser, p. 721.

Sir Evan James ('The Long White Mountain, p. 299) writes as follows:—"The road to Tsitsihar runs generally parallel to the left bank of the Nonni, but floods had converted all the intervening country into a succession of lakes, on the banks of which were great flocks of the Common and Demoiselle Cranes."

147. GRUS JAPONENSIS Müll. Manchurian Crane.

Tacz. p. 806; Dresser, p. 719.

Sir Evan James found this Crane "pretty numerous" in the vast swamps beyond Petuna ('The Long White Mountain,' p. 296).

148. OTIS TARDA DYBOWSKII. Siberian Bustard.

Tacz. p. 790; Dresser, p. 724.

Near Tsitsihar, on "vast undulating plains, stretching

before us as far as the eye could reach, and covered with succulent grass," Sir Evan James met with "prodigious numbers of this fine Bustard" ('The Long White Mountain,' p. 298). He brought home a specimen, which is now in the British Museum.

149. *CHARADRIUS DOMINICUS* Müll. Eastern Golden Plover.

Tacz. p. 815; Dresser, p. 732.

a-d. ♀ ♀ ♀ ♀. Chu-chia Tai, Kirin Province. Aug. 22-27, 1908.

My birds from Chu-chia Tai were all changing into winter dress, black and white being equally proportioned and intermixed on the under surface. Capt. Karpow procured this Plover at Yingtzu, Sept. 10, 1901 (*Bianchi*).

150. *ÆGIALITIS MONGOLA* (Pall.). Mongolian Ringed Plover.

Tacz. p. 822; Dresser, p. 734.

a. ♂. Chu-chia Tai, Kirin Province. Aug. 22, 1908.

When shot this individual was still in breeding-plumage, with rusty-red under parts.

151. *ÆGIALITIS PLACIDA* (Gray). Hodgson's Ringed Plover.

Ingram, *Ibis*, 1908, p. 164.

a. ♀. (Ssü-taa Ching.) June 17, 1886. (*E. J.*)

Iris brown; feet yellow.

Hodgson's Ringed Plover was procured by Sir Evan James about a hundred and fifty miles from the coast; this fact is interesting, as it agrees with my observations of the bird in Japan (*l. c.*), where it appeared to be almost exclusively an inland breeding species.

152. *VANELLUS CRISTATUS* Wolf & Meyer. Lapwing.

Tacz. p. 838; Dresser, p. 749.

a-c. ♂ ♀ ♀. Khingan Mts., alt. 3400 ft. May 23-June 14, 1908.

Iris brown; feet reddish-brown; bill black.

153. *HÆMATOPUS OSTRALEGUS OSCULANS*. Eastern Oystercatcher.

Tacz. p. 843; Dresser, p. 751.

A specimen is recorded from Yingtzu, May 8, 1908 (*Bianchi*).

154. *SCOLOPAX RUSTICULA* (Linn.). Woodcock.

Tacz. p. 949; Dresser, p. 756.

Sir Evan James observed a few Woodcocks between Sansing and Ninguta, but did not preserve any skins.

155. *GALLINAGO CÆLESTIS* (Frenzel). Common Snipe.

Tacz. p. 960; Dresser, p. 759.

a, b. ♂ ♂. Khingan Mts., alt. 3400 ft. May 21, 1908.

c. ♀. Chu-chia Tai, Kirin Province. Aug. 27, 1908.

d-h. ♀ ♀ ♀ ♂. Fan-chia Tun. Sept. 3-17, 1908.

156. *GALLINAGO STENURA* (Kuhl). Pin-tailed Snipe.

Tacz. p. 959; Dresser, p. 761.

a, b. ♂ ♀. Khingan Mts. May 23, 1908.

c, d. ♂ ♂. Chu-chia Tai, Kirin Province. Aug. 18, 1908.

e-g. ♂ ♂ ♀. Chu-chia Tai, Kirin Province. Aug. 20, 1908.

h-j. ♀ ♀ ♂. Chu-chia Tai, Kirin Province. Aug. 23-27, 1908.

Iris brown; feet greenish; bill drab, darker towards tip.

The occurrence of this Snipe in the Khingans on May 23 is interesting, as it points to its nesting in Manchuria. Seebohm (*Geogr. Distr. of Charadr.* p. 478) says, "It is doubtful if it breeds as far south as the valley of the Amur"; but since then Prjevalski found it nesting in large numbers on the Hoang Ho (Yellow River), in S. Mongolia.

157. *TRINGA MINUTA* Leisl. Little Stint.

Tacz. p. 918; Dresser, p. 770.

a. ♂. Chu-chia Tai, Kirin Province. Aug. 27, 1908.

b. ♀. Fan-chia Tun, Kirin Province. Sept. 9, 1908.

158. *TOTANUS OCHROPUS* (Linn.). Green Sandpiper.

Tacz. p. 872 ; Dresser, p. 789.

a. ♀. Chu-chia Tai, Kirin Province. Aug. 19, 1908.

b, c. ♂ ♀. Fan-chia Tun, Kirin Province. Sept. 14 and 15, 1908.

159. *TOTANUS GLAREOLA* (Linn.). Wood-Sandpiper.

Tacz. p. 874 ; Dresser, p. 790.

a. ♂. Khingan Mts., alt. 3400 ft. May 23, 1908.

b. ♂. Chu-chia Tai, Kirin Province. Aug. 20, 1908.

c. ♂. Fan-chia Tai, Kirin Province. Sept. 14, 1908.

Evidently passes through Manchuria on both migrations.

160. *TRINGOIDES HYPOLEUCUS* (Linn.). Common Sandpiper.

Tacz. p. 882 ; *Totanus hypoleucus* Dresser, p. 791.

a, b. ♀ ♀. Chang-chun, Kirin Province. July 14 and 16, 1908.

c. ♀. Chu-chia Tai, Kirin Province. Aug. 22, 1908.

d. ♂. Fan-chia Tun, Kirin Province. Sept. 2, 1908.

e. (Tung-hua Hsien.) June 6, 1886. (*E. J.*)

The Common Sandpiper doubtless breeds in most of the mountain-ranges; Sir Evan James met with it in South Manchuria.

161. *NUMENIUS ARCUATUS LINEATUS*. Oriental Curlew.

Tacz. p. 938 ; Dresser, p. 803.

a. ♂. Khingan Mts., alt. 330 ft. June 2, 1908.

Iris brown ; legs greyish ; bill brown.

Having the lower back and axillaries pure white, this specimen may be referred to the Eastern form. The two races, however, intergrade, and Dr. Sharpe, in his 'Hand-list,' does not keep up the subspecies.

162. *NUMENIUS CYANOPUS* Vieill. Australian Curlew.

Tacz. p. 940 ; Dresser, p. 804.

Bianchi records this bird from Yingtzu, April 9, 1901.

163. *LARUS CANUS* Linn. Common Gull.

Tacz. p. 1033 ; Dresser, p. 829.

This is another species that I include upon the authority of Bianchi ; a specimen was obtained at Yingtzu, March 31, 1901.

164. *LARUS VEGÆ* Palmén. Eastern Herring-Gull.

Tacz. p. 1028 ; Dresser, p. 834.

a. ♂ juv. Steppes, near Tsi-tsi-ha. [Sept. 1886.]

165. *PODICIPES CRISTATUS* (Linn.). Great Crested Grebe.

Tacz. p. 1251 ; Dresser, p. 877.

Capt. Karpow procured a specimen at Yingtzu on April 4, 1901 (*Bianchi*).

XXIII.—*On the Tail-feathers of the Dabchick.*

By W. P. PYCRAFT, F.Z.S., M.B.O.U.

(Text-figure 10.)

THE following short account of the number and arrangement of the tail-feathers of the Dabchick (*Podiceps fluviatilis*) is the result of a more minute examination of the disposition of these feathers, undertaken at the request of Dr. Sclater, and as a supplement to my paper on this subject published in the volume of 'The Ibis' for 1907 (p. 472).

In that paper these feathers were described as "semi-plumous in character and not, apparently, exceeding eight in number." I also pointed out that they are arranged, not in a continuous series, or, after the fashion of normal tail-feathers, in a close series, but, on the contrary, are set in the form of a horseshoe, of which the free ends are directed upwards, and so lie alternately in relation one to another.

This description is practically confirmed in detail by my later work ; though I still find it difficult to decide as to whether